

## **NDT on Campus**

### **NDT: an Essential Part of the Curriculum**

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The Neuro-Developmental Treatment approach (NDT) is an essential part of the curriculum at the University of Utah Division of Occupational Therapy. A wide range of practice models and theories are introduced during the first foundational year of coursework, including Dynamic Systems Theory, Sensory Integration/Processing, Motor Control, the Developmental Frame of Reference, the Person-Occupation-Environment practice model, and NDT.

These practice models and theories are then applied during second-year courses that address treatment in pediatric and adult therapy. After being introduced to the wide variety of approaches to evaluation and treatment planning available to practitioners, students are well prepared to conceptualize how multiple frames of reference, employed simultaneously, can enhance functional outcomes. Occupational therapy students are well prepared to understand the complex nature of NDT, which includes the incorporation and infusion of many of these models and theories, as they move into the second year of the curriculum where NDT is applied in pediatric and adult evaluation and intervention coursework.

Louise Dunn, ScD, OTR/L, BCP, who is responsible for the pediatric curriculum content, feels that NDT is an important topic to include, particularly when addressing therapeutic interventions for infants, toddlers, and their caregivers. NDT also provides the students with concepts and strategies that support participation and engagement in daily activities for children with neurological and/or postural problems. Although Louise believes that NDT is an important part of the pediatric curriculum, she believes that it does not stand alone as an approach to treatment. Availability of further studies on the efficacy of NDT as part of a fidelity of treatment model would strengthen the knowledge students bring with them to incorporate in future practice.

The adult neurorehabilitation curriculum is designed to compare and contrast a number of theories and treatment approaches, including techniques developed by Rood, Brunnstrom Movement Therapy, Proprioceptive Neuromuscular Facilitation, NDT, motor control and learning theories, and Constraint-Induced Movement Therapy. Students are then equipped with the tools to understand the pros and cons of each therapy perspective so they can begin to develop the ability to provide the best type of therapy for a particular individual working within a particular context. Examples of how and when theories can be used simultaneously, or how they can enhance or conflict with each other, are also provided.

In addition to the required coursework, which includes instruction in the application of NDT theory, the division offers a three-credit elective to third year OT students titled, Occupation in Adult Neuro Rehab. I designed and teach this class, which is based entirely on NDT principles with coursework inspired by a variety of NDTA-approved courses, including the three-week Certificate Course in Adult Hemiplegia and the advanced upper extremity and fine motor courses. The class meets for 16 weeks, three hours per week, and is designed to provide specialized train